

AMENDMENTS TO THE DRAWINGS

Please amend Figures 1-7 as shown in the enclosed replacement sheets. Figures 1-7 are amended to add the legend "Prior Art" to each figure. No new subject matter is added by way of these amendments.

REMARKS

Please reconsider this application in view of the above amendments and the following remarks. Applicants thank the Examiner for carefully considering this application.

Revocation and Substitution of Power of Attorney

A Revocation and Substitution of Power of Attorney is currently pending in the USPTO, appointing the undersigned as Applicants' representative for this application. A copy of the Revocation and Substitution of Power of Attorney is attached for the Examiner's convenience.

Amendments to the Specification

The specification is amended herein to add new paragraphs to provide written description for the limitations in the originally filed claims directed to "elision criterion." No new subject matter is added by these amendments as support may be found in claims 1, 2-6, 18-21, 27-31, and 33-47 as originally filed and on page 51, lines 15-17, of the instant Specification.

Information Disclosure Statement (IDS)

Compliance with 37 C.F.R. §1.98(b)(5)

The Examiner asserts that the information disclosure statements (IDSs) filed on 10/3/2003 and 12/19/2005 fail to comply with 37 C.F.R. § 1.98(b)(5) because each

publication listed in the IDSs is not identified by publisher, author (if any), title, relevant pages of the publication, date, and place of publication. *See* Office Action mailed March 27, 2007 at page 2. Applicants carefully reviewed the publications listed in the two IDSs and determined that many of publication citations in the two IDSs failed to include one or both of the relevant page numbers and the date. Applicants also determined that the number of the foreign patent document cited on line 2 of the Foreign Patent Documents section on sheet 3 of the IDS filed on 12/19/2005 contains a typographical error. The cited foreign patent document, EP 0 904 055 is completely irrelevant to Applicants' invention. Applicants withdraw the incorrectly cited foreign patent document from consideration. Further, Applicants determined that citation 20 on sheet 2 of the IDS filed on 10/3/2003 is a United States patent document, not non-patent literature.

Because of the number of unintentional errors and omissions, Applicants will timely file a corrected IDS listing all of the documents (without duplications) cited in the IDSs filed on 10/3/2003 and 12/19/2005 with proper citations for the incorrectly cited publications, the correct citation for the foreign patent document, and correctly listing the United States patent document with the other United States patent documents. Applicants have not filed the corrected IDS herewith because Applicants need to verify the citations against the references that were actually provided to the Examiner with the previously filed IDSs and Applicants do not yet have access to the file for this application in PAIR. As soon as the United States Patent and Trademark Office (USPTO) enters the pending Revocation and

Substitution of Power of Attorney, Applicants will conduct the needed verification and file the corrected IDS.

Consideration of the IDSs

The Examiner stated that the IDSs filed on 10/3/2002, 12/19/2005, 2/17/2006, 3/13/2006, and 4/17/2006 have not been considered based on MPEP § 2004.13. As an initial matter, Applicants note that MPEP § 2004, which documents example procedures that may be followed to meet the duty of disclosure, explicitly states that “compliance with these procedures may *not* be required [Emphasis added].” Therefore, Applicants assert that the Examiner cannot require that Applicants conform to the procedures found in MPEP § 2004.13 for the cited IDSs.

That being said, in the interest of advancing prosecution of the application, Applicants reviewed the list of cited documents. None of these documents were specifically brought to Applicants’ attention nor are any of the documents known to be of most significance to Applicants’ invention.

Requirement for Explanation of Relevance

The Examiner required that Applicants provide a concise explanation of the relevance of the content of each document cited in the IDSs filed on 10/3/2002, 12/19/2005, 2/17/2006, 3/13/2006, and 4/17/2006. Applicants assert that this requirement is improper. Applicants are unaware of any current law or rule that requires the submission of a concise

explanation of relevance for *every* document cited in an IDS. Applicants are only required to provide a concise explanation of the relevance of patents and publications listed in the IDSs that are *not in the English language*. See 37 C.F.R. 1.99(b)(3)(i).

Accordingly, Applicants have reviewed the cited IDSs for any documents listed that are not in the English language. All the documents listed are in the English language except one foreign patent document cited on sheet 3 of the IDS filed on 12/19/2005. As previously explained, this foreign patent document, EP 0 904 055, was cited in error due to a typographical error in the identifying number and is completely irrelevant (it is a pharmaceutical patent) to the Applicants' invention. Furthermore, Applicants are not providing a concise explanation of the relevance of the other listed documents. If the Examiner wishes to maintain this requirement, clarification is requested.

Drawings

The Examiner objected to Figures 1-7, stating that these figures should include a legend such as "Prior Art" because only that which is old is shown. Figures 1-7 are amended herein to include a "Prior Art" legend. Accordingly, withdrawal of this objection is requested. Further, Applicants request that the Examiner acknowledge that the drawings as amended are accepted in the next action.

Disposition of Claims

Claims 1-47 are pending. Claims 1, 2, 18, 27, 33, 37, 42, 46, and 47 are independent. The remaining claims depend directly or indirectly from the independent claims.

Claim Amendments

Claim 42 is amended to correct a typographical error. Claims 46 and 47 are amended to clarify the scope of the invention. No new subject matter is added by way of these amendments as support may be found, for example, on page 51, lines 15-17, of the Instant Specification.

Rejections under 35 U.S.C. § 101

Claims 1-45

Claims 1-45 stand rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter for allegedly being directed to software embodied as electromagnetic signals. This rejection is traversed.

To justify this rejection of claims 1-45, the Examiner states that “[i]n the *specification*, the applicant suggests that the invention may be target [sic] towards the non-statutory subject matter as the software may be embodied as electromagnetic signals by which the computer instructions may be communicated.” *See* Office Action dated March 27, 2007 at page 3. The Examiner then states that claims involving signals encoded with

functional descriptive material do not contain statutory subject matter. *See* Office Action dated March 27 at page 3. None of claims 1-45 explicitly recite electromagnetic signals. The Examiner appears to be reading limitations from the specification into the claims, which is wholly improper. *See* MPEP 2111.01

Further, independent claims 1, 2, and 18 clearly recite methods (*i.e.*, processes) and independent claims 27, 33, 37, and 42 clearly recite computer systems (*i.e.*, machines). Claims 3-17, 19-26, 28-32, 38-41, and 42-45, which depend directly or indirectly from claims 1, 2, 18, 27, 33, 37, and 42, also recite, respectively, methods and computer systems. Processes (*i.e.*, methods) and machines (*i.e.*, computer systems) are statutory subject matter. *See* 35 U.S.C. § 101.

In view of the above, claims 1-45 are in compliance with 35 U.S.C. § 101 and are therefore allowable. Withdrawal of this rejection is requested

Claims 46 and 47

Claims 46 and 47 stand rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter because the claims are directed to “electromagnetic signals propagating on a computer network.” *See* Office Action mailed March 27, 2007 at page 3. Claims 46 and 47 are amended to recite “[a] *computer readable medium* comprising program instructions stored therein for execution on a processor for the practice of a method for ..., the method comprising [Emphasis added].”

In the case *In Re Beauregard*, the Commissioner of Patent and Trademarks declared “that computer programs embodied in a tangible medium, such as floppy diskettes, are patentable subject matter under 35 U.S.C. § 101,” and further conceded that the claims of *In Re Beauregard* were statutory. *In Re Beauregard*, 53 F.3d 1583 (1995); U.S. Patent No. 5,710,578 (“*Beauregard*”). Claims 46 and 47, as amended, explicitly recite a computer program embodied in a tangible medium (*i.e.*, a computer readable medium on which program instructions are stored). Therefore, similar to *Beauregard*, amended claims 46 and 47 are directed to statutory subject matter. Accordingly, amended claims 46 and 47 are in compliance with 35 U.S.C. § 101 and are therefore allowable. Withdrawal of this rejection is requested.

Claims 1- 47

Claims 1-47 stand rejected under 35 U.S.C. § 101 because the claimed subject matter does not produce a tangible result. This rejection is traversed.

Claim 1 explicitly recites “emitting, at a predetermined point in the mutator, at least one deferred write barrier corresponding to a list entry that was not combined or elided.” Claims 2, 27, 37, and 46 recite similar limitations. Applicants assert that emitting a write barrier from a mutator is a useful, concrete, and tangible result. As is clearly appreciated by those with ordinary skill in the art of computer science, a write barrier is code added to a write operation in a mutator *to record (i.e., store in memory) information* which a garbage collector uses to determine where references were written or may have been written since

the last garbage collection interval. *See* Specification at page 11, lines 11-14. Thus, emitting a write barrier has the tangible result of storing information in computer memory for use by a garbage collector.

Claim 18 explicitly recites “performing garbage-collection operations based on the contents of the remaining list entries that are not combined or elided.” Claims 33, 42 and 47 recite similar limitations. Applicants assert that performing garbage collection operations is a useful, concrete, and tangible result. As is clearly appreciated by those with ordinary skill in the art of computer science, the result of garbage collection is that memory, a finite resource, is reclaimed so that the memory may be used again and/or memory may be used most effectively. Thus, performing garbage collection operations is a tangible result having real world value.

In view of the above, claims 1, 2, 18, 27, 33, 37, 42, 46, and 47 each claim subject matter that produces a tangible result as required by 35 U.S.C. § 101. Claims 3-17, 19-26, 28-32, 38-41, and 42-45, which depend directly or indirectly from claims 1, 2, 18, 27, 33, 37, and 42, are also allowable for at least the same reasons. Accordingly, withdrawal of this rejection is requested.

Rejections under 35 U.S.C. § 112***Rejections under 35 U.S.C. § 112, first paragraph***

Claims 1-47 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Specifically, the Examiner states that there is no description for the limitation “a set of at least one elision criterion” as recited in claims 1, 2, 18, 27, 33, 37, 42, and 46-47. Further, the Examiner states that neither “a set” nor “one” elision criterion is found in Applicants’ written description. To the extent this rejection may still apply in view of Applicants’ amendments to the specification, this rejection is traversed.

Applicants’ have amended the specification herein to include paragraphs providing additional written description related to “elision criterion.” Specifically, the specification now clearly explains that an elision criterion may be, for example, a criterion that determines whether two or more deferred write barriers, if executed, would provide unnecessary or redundant information to a garbage collector. The specification also clearly explains that an elision criterion may be, for example, a criterion that 1) determines whether the two or more deferred write barriers correspond to reference-modifying instructions that modify the same memory location; 2) determines whether two or more deferred write barriers correspond to reference-modifying instructions that modify reference values located in the same object or card; or 3) determines whether two or more deferred write barriers

correspond to reference-modifying instructions that modify reference values located within a known range of memory addresses. Furthermore, it would be clear to one of ordinary skill in the art that a set of elision criterion is a group of one or more of the elision criterion described in the specification.

Thus, claims 1-47 contain subject matter that is described in the specification in compliance with 35 U.S.C. § 112, first paragraph. Accordingly, withdrawal of this rejection is requested.

Rejections under 35 U.S.C. § 112, second paragraph

Claims 1-47 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Specifically, the Examiner states that the scope of “elision criterion” is indefinite. This rejection is traversed.

As stated above, Applicants have amended the specification herein to provide additional written description for the term “elision criterion.” This additional written description clearly provides examples of elision criterion. Therefore, one of ordinary skill in the art reading claims 1-47 in view of the specification would clearly understand the scope of the term “elision criterion.” Accordingly, withdrawal of this rejection is requested.

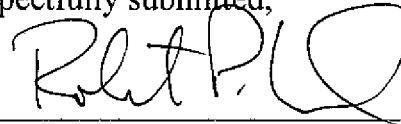
Conclusion

Applicants believe this reply is fully responsive to all outstanding issues and places this application in condition for allowance. If this belief is incorrect, or other issues arise, the Examiner is encouraged to contact the undersigned or his associates at the telephone number listed below. Please apply any charges not covered, or any credits, to Deposit Account 50-0591 (Reference Number 33226/971001).

Dated: July 27, 2007

Respectfully submitted,

By



Robert P. Lord
Registration No.: 46,479
OSHA · LIANG LLP
1221 McKinney St., Suite 2800
Houston, Texas 77010
(713) 228-8600
(713) 228-8778 (Fax)
Attorney for Applicants

Attachments: Revocation and Substitution of Power of Attorney
Replacement Sheets (7)

0:Auto-reply fax to 7132288 3 COMPANY:

Auto-Reply Facsimile Transmission



TO: Fax Sender at 7132288778

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07/25/2007 18:28 7132288778 OSHA LIANG LLP PAGE 01/22	
1	
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FROM: OSHA - LIANG LLP Robert F. Lord PHONE: (713) 228-8600 Attorney Dkt. #: 13126/971001; P7853	
MESSAGE TO: US Patent and Trademark Office FAX NUMBER: (571) 273-8300	
PTO IDENTIFIER: Application Number 10/679,183-Conf. #4158 Inventor: Alexander T. Garthwaite et al.	
DATE: July 25, 2007	
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PAGE 1/22 * RCVD AT 7/25/2007 2:01:48 PM [Eastern Daylight Time] * SVR:USPTO-EPXRF-311 * DNS:2738300 * CSD:7132288778 * DURATION (mm:ss):04:12	

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Attorney Dkt. #: 33226/971001; P7863			
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DATE: July 25, 2007

PTO IDENTIFIER: Application Number 10/679,183-Conf. #4158
Patent Number

Inventor: Alexander T. Garthwaite et al.

MESSAGE TO: US Patent and Trademark Office

FAX NUMBER: (571) 273-8300

FROM: OSHA · LIANG LLP

Robert P. Lord

PHONE: (713) 228-8600

Attorney Dkt. #: 33226/971001; P7863

PAGES (Including Cover Sheet): 22

CONTENTS: Transmittal (1 page)
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Revocation and Substitute POA under 37 CFR §1.36 with attached Appendix A (17 pages)
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TRANSMITTAL FORM <i>(to be used for all correspondence after initial filing)</i>		Application Number	10/679,183-Conf. #4158
		Filing Date	October 3, 2003
		First Named Inventor	Alexander T. Garthwaite
		Art Unit	2191
		Examiner Name	Not Yet Assigned
Total Number of Pages in This Submission	22	Attorney Docket Number	33226/971001; P7863

ENCLOSURES (Check all that apply)		
☐ Fee Transmittal Form ☐ Fee Attached ☐ Amendment/Reply ☐ After Final ☐ Affidavits/declaration(s) ☐ Extension of Time Request ☐ Express Abandonment Request ☐ Information Disclosure Statement ☐ Certified Copy of Priority Document(s) ☐ Reply to Missing Parts/Incomplete Application ☐ Reply to Missing Parts under 37 CFR 1.52 or 1.53	☐ Drawing(s) ☐ Licensing-related Papers ☐ Petition ☐ Petition to Convert to a Provisional Application ☒ Power of Attorney, Revocation Change of Correspondence Address ☐ Terminal Disclaimer ☐ Request for Refund ☐ CD, Number of CD(s) _____ ☐ Landscape Table on CD	☐ After Allowance Communication to TC ☐ Appeal Communication to Board of Appeals and Interferences ☐ Appeal Communication to TC (Appeal Notice, Brief, Reply Brief) ☐ Proprietary Information ☐ Status Letter ☒ Other Enclosure(s) (please identify below): Transmittal Letter (2 pages) Certificate of Transmission (1 page)
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SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT			
Firm Name	OSHA · LIANG LLP		
Signature			
Printed name	Robert P. Lord		
Date	July 25, 2007	Reg. No.	46,479

Docket No.: 33226/971001; P7863
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Alexander T. Garthwaite et al.

Application No.: 10/679,183

Confirmation No.: 4158

Filed: October 3, 2003

Art Unit: 2191

For: DEFERRING AND COMBINING WRITE
BARRIERS FOR A GARBAGE-COLLECTED
HEAP

Examiner: Not Yet Assigned

TRANSMITTAL LETTER

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Enclosed are the following items for filing in connection with the above-referenced Patent Application:

1. Transmittal (1 page);
2. Revocation and Substitute POA under 37 CFR §1.36 with attached Appendix A (17 pages) ; and
3. Certificate of Transmission (1 page).

The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in

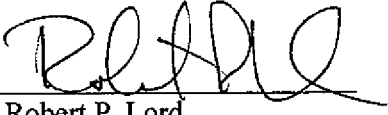
Application No.: 10/679,183

Docket No.: 33226/971001; P7863

this application by this firm) to our Deposit Account No. 50-0591, under Order No. 33226/971001; P7863.

Dated: July 25, 2007

Respectfully submitted,

By 
Robert P. Lord
Registration No.: 46,479
OSHA · LIANG LLP
1221 McKinney St., Suite 2800
Houston, Texas 77010
(713) 228-8600

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Name of Applicant and Assignee: SUN MICROSYSTEMS, INC.
Address of Applicant and Assignee: 4150 Network Circle
Santa Clara, CA 95054

Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

**REVOCATION AND SUBSTITUTION
OF POWER OF ATTORNEY UNDER 37 C.F.R. §1.36**

Dear Sir:

Pursuant to 37 C.F.R. §1.36, Sun Microsystems, Inc., the applicant and assignee of the patent applications listed on the attached APPENDIX A, revokes all previous powers of attorney in the patent applications listed on the attached APPENDIX A, hereby appoints the following attorneys and/or agents assigned to the Customer Number listed below to prosecute the patent applications listed on the attached APPENDIX A, and to transact all business in the U.S. Patent and Trademark Office connected therewith:

Customer Number 32615

32615
PATENT TRADEMARK OFFICE

Please direct all correspondence and telephone calls concerning the patent applications listed on the attached APPENDIX A to:

Robert P. Lord
OSHA • LIANG LLP
1221 McKinney Street, Suite 2800
Houston, Texas 77010
Telephone No.: (713) 228-8600
Facsimile No.: (713) 228-8778

Further, please change the attorney/docket number corresponding to the patent applications listed in APPENDIX A from the attorney/docket number on file to that indicated on APPENDIX A.

The undersigned (whose title is supplied below) is empowered to sign this certificate on behalf of the above-identified applicant.

The undersigned hereby declares that all statements made herein of the undersigned's own knowledge are true, that all statements made on information and belief are believed to be true, and further, that these statements are made with the knowledge that willful false statements, and the like so made, are punishable by fine or imprisonment, or both, under Section 1001, Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the sixteen patent applications listed on the attached APPENDIX A or any patents issuing thereon.

Signature: Joseph A. Twarowski Dated: Dec. 20, 2006
Name: Joseph A. Twarowski
Title: Assistant General Counsel
Sun Microsystems, Inc.

APPENDIX A

1. **Patent Application/Serial No.:** 10/799,049
Title: GARBAGE-FIRST GARBAGE COLLECTION
Filed: 3/12/2004
Applicant: Sun Microsystems, Inc.
Reel/Frame No.: 015079/0946
Reference No: 33226/940001; SUN040074

2. **Patent Application/Serial No.:** 10/394,813
Title: ELISION OF WRITE BARRIERS FOR STORES WHOES VALUES ARE IN CLOSE PROXIMITY
Filed: 3/21/2003
Applicant: Sun Microsystems, Inc.
Reel/Frame No.: 013905/0661
Reference No: 33227/023001; P7479

3. **Patent Application/Serial No.:** 09/551,113
Title: CONCURRENT SHARED OBJECT IMPLEMENTED USING A LINKED-LIST WITH AMORTIZED NODE ALLOCATION
Filed: 4/18/2000
Applicant: Sun Microsystems, Inc.
Reference No: 33226/960000; P4665

4. **Patent Application/Serial No.:** 10/664,799
Title: BLINDED ENCRYPTION AND DECRYPTION
Filed: 9/18/2003
Applicant: Sun Microsystems, Inc.
Reference No: 33227/009001
5. **Patent Application/Serial No.:** 10/313,878
Patent No.: 7,143,124
Title: DECETION OF DEAD REGIONS DURING INCREMENTAL COLLECTION
Filed: 12/6/2002
Applicant: Sun Microsystems, Inc.
Reel/Frame No.: 013559/0709
Reference No: 33226/977001; P8275
6. **Patent Application/Serial No.:** 09/547,288
Title: MAINTAINING A DOUBLE-ENDED QUEUE IN A CONTIGUOUS ARRAY WITH CONCURRENT NON-BLOCKING INSERT AND REMOVE OPERATIONS USING A DOUBLE COMPARE-AND-SWP PRIMITIVE
Filed: 4/11/2000
Applicant: Sun Microsystems, Inc.
Reel/Frame No.: 010712/0617
Reference No: 33226/959002; P4663

7. **Patent Application/Serial No.:** 10/861,704
Title: THREAD SUSPENSION SYSTEM AND METHOD
Filed: 6/4/2004
Applicant: Sun Microsystems, Inc.
Reference No: 33226/955002; P2927 C
8. **Patent Application/Serial No.:** 09/454,427
Title: DYNAMIC EMBEDDING OF LITERAL OBJECT DATA IN SUPPLIED INSTANCE OF INFORMATION OBJECT
Filed: 12/3/1999
Applicant: Sun Microsystems, Inc.
Reel/Frame No.: 010448/0577
Reference No: 33226/956001; P3916
9. **Patent Application/Serial No.:** 11/099,720
Title: SEQUENTIALLY PERFORMED COMPARE-AND-SWAP
Filed: 4/6/2005
Applicant: Sun Microsystems, Inc.
Reel/Frame No.: 016661/0899
Reference No: 33226/962002; P4667-US-DIV-1

10. Patent Application/Serial No.: 09/710,218

Patent No.: 7,117,502

Title: LINKED-LIST IMPLEMENTATION OF
DATA STRUCTURE WITH
CONCURRENT NON-BLOCKING
INSERT AND REMOVE OPERATIONS

Filed: 11/10/2000

Applicant: Sun Microsystems, Inc.

Reel/Frame No.: 011305/0889

Reference No: 33226/963001; P4896

11. Patent Application/Serial No.: 10/996,508

Title: WORK-STEALING QUEUES FOR
PARALLEL GARBAGE COLLECTION

Filed: 11/23/2004

Applicant: Sun Microsystems, Inc.

Reel/Frame No.: 011270/0285

Reference No: 33226/964002; P4946C1

12. Patent Application/Serial No.: 60/204,184

Title: PARALLEL GARBAGE COLLECTION
FOR SHARED MEMORY
MULTIPROCESSORS

Filed: 5/15/2000

Applicant: Sun Microsystems, Inc.

Reference No: 33226/964000; P4948

13. Patent Application/Serial No.: 09/697,729

Patent No.: 6,823,351

Title: WORK-STEALING QUEUES FOR
PARALLEL GARBAGE COLLECTION

Filed: 10/26/2000

Applicant: Sun Microsystems, Inc.

Reel/Frame No.: 011270/0285

Reference No: 33226/964001; P4946

14. Patent Application/Serial No.: 09/893,256

Patent No.: 7,103,887

Title: LOAD-BALANCING QUEUES
EMPLOYING LIFO/FIFO WORK
STEALING

Filed: 6/27/2001

Applicant: Sun Microsystems, Inc.

Reel/Frame No.: 011943/0085

Reference No: 33226/966001; P5388

15. Patent Application/Serial No.: 10/166,874

Title: PREFETCHING TECHNIQUES FOR
NETWORK INTERFACES

Filed: 6/11/2002

Applicant: Sun Microsystems, Inc.

Reel/Frame No.: 013001/0641

Reference No: 33226/967001; P7322

16. Patent Application/Serial No.: 10/679,183

Title: DEFERRING AND COMBINING
WRITE BARRIERS FOR A GARBAGE-
COLLECTED HEAP

Filed: 10/3/2003

Applicant: Sun Microsystems, Inc.

Reel/Frame No.: 014590/0742

Reference No: 33226/971001; P7863

17. Patent Application/Serial No.: 10/653,828

Title: SHARED SYNCHRONIZED SKIP-LIST
DATA STRUCTURE AND
TECHNIQUE EMPLOYING
LINEARIZABLE OPERATIONS

Filed: 9/3/2003

Applicant: Sun Microsystems, Inc.

Reel/Frame No.: 014483/0341

Reference No: 33226/972001; P7982

18. Patent Application/Serial No.: 10/991,148

Title: USE OF MEMORY PROTECTION TO
IMPLEMENT REPLICATING
COLLECTION IN A INCREMENTAL,
COPYING GARBAGE COLLECTOR

Filed: 11/17/2004

Applicant: Sun Microsystems, Inc.

Reel/Frame No.: 016007/0616

Reference No: 33226/974001; P8226

19. Patent Application/Serial No.: 10/881,101

Title: USING CLASS PROPERTIES TO
DEGREGATE OBJECTS IN A
GENERATION MANAGED BY THE
TRAIN ALGORITHM

Filed: 6/30/2004

Applicant: Sun Microsystems, Inc.

Reel/Frame No.: 015539/0072

Reference No: 33226/975001; P8231

20. Patent Application/Serial No.: 11/021,287

Title: METHOD AND APPARATUS FOR
FORWARDING REFERENCES TO
OBJECTS CONCURRENTLY WITH
SPACE-INCREMENTAL GARBAGE
COLLECTION

Filed: 12/23/2004

Applicant: Sun Microsystems, Inc.

Reel/Frame No.: 015627/0335

Reference No: 33226/976001; P8274

21. Patent Application/Serial No.: 10/313,878

Patent No.: 7,143,124

Title: DETECTION OF DEAD REGIONS
DURING INCREMENTAL
COLLECTION

Filed: 12/6/2002

Applicant: Sun Microsystems, Inc.

Reel/Frame No.: 013559/0709

Reference No: 33226/977001; P8275

22. Patent Application/Serial No.: 10/930,483

Title: IMPROVED SCANNING OF
EVACUATED OBJECTS IN A
GENERATION MANAGED BY THE
TRAIN ALGORITHM

Filed: 8/31/2004

Applicant: Sun Microsystems, Inc.

Reel/Frame No.: 015782/0538

Reference No: 33226/978001; P8276

23. Patent Application/Serial No.: 10/391,405

Title: PARALLEL CACHING OF
INSERTIONS INTO REMEMBERED
SETS

Filed: 3/18/2003

Applicant: Sun Microsystems, Inc.

Reel/Frame No.: 013890/0128

Reference No: 33226/979001; P8303

24. Patent Application/Serial No.: 11/131,827

Title: METHOD AND APPARATUS FOR
CONCURRENTLY PROCESSING
REMEMBERED SETS IN A SPACE-
INCREMENTAL GARBAGE
COLLECTOR

Filed: 5/18/2005

Applicant: Sun Microsystems, Inc.

Reel/Frame No.: 016366/0209

Reference No: 33226/981001; P8317

25. Patent Application/Serial No.: 10/309,503

Patent No.: 7,136,887

Title: METHOD AND MECHANISM FOR
FINDING REFERENCES IN A CARD
IN TIME LINEAR IN THE SIZE OF
THE CARD IN A GARBAGE-
COLLECTED HEAP

Filed: 12/4/2002

Applicant: Sun Microsystems, Inc.

Reel/Frame No.: 013550/0405

Reference No: 33226/982001; P8318

26. Patent Application/Serial No.: 10/799,186

Title: EXPLOITING POPULAR OBJECTS TO
REDUCE MUTATOR OVERHEAD

Filed: 3/12/2004

Applicant: Sun Microsystems, Inc.

Reel/Frame No.: 015091/0736

Reference No: 33226/984001; SUN040081

27. Patent Application/Serial No.: 10/986,527

Title: EXPLOITING POPULAR OBJECTS TO
REDUCE MUTATOR OVERHEAD

Filed: 11/11/2004

Applicant: Sun Microsystems, Inc.

Reel/Frame No.: 015983/0321

Reference No: 33226/984002; SUN040081

28. Patent Application/Serial No.: 10/799,187

Title: CONCURRENT-MARKING-
INITIATION HEURISTIC

Filed: 3/12/2004

Applicant: Sun Microsystems, Inc.

Reel/Frame No.: 015095/0376

Reference No: 33226/983001; SUN040079

29. Patent Application/Serial No.: 10/986,401

Title: CONCURRENT-MARKING-
INITIATION HEURISTIC

Filed: 11/11/2004

Applicant: Sun Microsystems, Inc.

Reel/Frame No.: 016020/0320

Reference No: 33226/983002; SUN040079-CIP

30. Patent Application/Serial No.: 11/090,398

Title: METHOD AND APPARATUS FOR
SWITCHING BETWEEN PER-THREAD
AND PER-PROCESSOR RESOURCE
POOLS IN MULTI-THREADED
PROGRAMS

Filed: 3/25/2005

Applicant: Sun Microsystems, Inc.

Reel/Frame No.: 016300/0319

Reference No: 33226/987001; SUN040951

31. Patent Application/Serial No.: 11/215,510

Title: METHOD AND APPARATUS FOR
SELECTIVELY ELIMINATING WRITE
BARRIERS IN SNAPSHOT-AT-THE-
BEGINNING CONCURRENT-
MARKING GARBAGE COLLECTORS

Filed: 8/30/2005

Applicant: Sun Microsystems, Inc.

Reel/Frame No.: 016542/0156

Reference No: 33226/989001; SUN041094

32. Patent Application/Serial No.: 11/128,791

Title: METHOD AND APPARATUS FOR
REDUCING REMEMBERED SET
OVERHEAD IN A GENERATIONAL
GARBAGE COLLECTOR BY
CONSTRAINING COLLECTION SET
CHOICE

Filed: 5/13/2005

Applicant: Sun Microsystems, Inc.

Reel/Frame No.: 016336/0241

Reference No: 33226/990001; SUN041424

33. Patent Application/Serial No.: 11/021,260

Title: METHOD AND APPARATUS FOR
ISOLATING SELECTED HEAP
OBJECTS USING A FAULTING
ADDRESS TRAP

Filed: 12/23/2004

Applicant: Sun Microsystems, Inc.

Reel/Frame No.: 015627/0286

Reference No: 33226/991001; SUN041505

34. Patent Application/Serial No.: 11/091,611

Title: METHOD AND APPARATUS FOR
IMPROVING PARALLEL MARKING
GARBAGE COLLECTORS THAT USE
EXTERNAL BITMAPS

Filed: 3/28/2005

Applicant: Sun Microsystems, Inc.

Reel/Frame No.: 016082/0276

Reference No: 33226/992001; SUN050023

35. Patent Application/Serial No.: 11/091,032

Title: METHOD AND APPARATUS FOR
RECORDING MODIFIED REFERENCE
LOCATIONS IN GARBAGE-
COLLECTED HEAP MEMORY

Filed: 3/28/2005

Applicant: Sun Microsystems, Inc.

Reel/Frame No.: 016082/0191

Reference No: 33226/993001; SUN050025

36. Patent Application/Serial No.: 11/218,145

Title: METHOD AND APPARATUS FOR
DYNAMICALLY PRE-TENURING
OBJECTS IN A GENERATIONAL
GARBAGE COLLECTION SYSTEM

Filed: 9/1/2005

Applicant: Sun Microsystems, Inc.

Reel/Frame No.: 016542/0121

Reference No: 33226/994001; SUN050202

37. Patent Application/Serial No.: 11/218,179

Title: METHOD AND APPARATUS FOR
BYTE ALLOCATION ACCOUNTING
IN A SYSTEM HAVING A MULTI-
THREADED APPLICATION AND A
GENERATIONAL GARBAGE
COLLECTOR THAT DYNAMICALLY
PRE-TENURES OBJECTS

Filed: 9/1/2005

Applicant: Sun Microsystems, Inc.

Reel/Frame No.: 016542/0109

Reference No: 33226/995001; SUN050203

38. Patent Application/Serial No.: 11/474,599

Title: APPARATUS AND METHOD FOR
COORDINATED VIEWS OF
CLUSTERED DATA

Filed: 6/26/2006

Applicant: Sun Microsystems, Inc.

Reel/Frame No.: 017917/0010

Reference No: 33226/996001; SUN050482

39. Patent Application/Serial No.: 11/477,021

Title: METHOD AND APPARATUS FOR
SEARCHING AND RESOURCE
DISCOVERY IN A DISTRIBUTED
ENTERPRISE SYSTEM

Filed: 6/28/2006

Applicant: Sun Microsystems, Inc.

Reference No: 33226/997001; SUN050600

40. Patent Application/Serial No.: 11/413,641

Title: METHOD AND APPARATUS FOR
BROWSING SEARCH RESULTS VIA A
VIRTUAL FILE SYSTEM

Filed: 4/28/2006

Applicant: Sun Microsystems, Inc.

Reel/Frame No.: 017754/0711

Reference No: 33226/998001; SUN050633

41. Patent Application/Serial No.: 11/182,539

Title: METHOD AND APPARATUS FOR
GENERATING MEDIA PLAYLISTS BY
DEFINING PATHS THROUGH MEDIA
SIMILARITY SPACE

Filed: 7/15/2005

Applicant: Sun Microsystems, Inc.

Reel/Frame No.: 016366/0563

Reference No: 33226/999001; SUN050732

42. Patent Application/Serial No.: 10/800,363

Title: MIXING COPYING COLLECTION
AND CONCURRENT MARKING

Filed: 3/12/2004

Applicant: Sun Microsystems, Inc.

Reel/Frame No.: 015983/0314

Reference No: 33226/938000; SUN040073

43. Patent Application/Serial No.: 09/837,669

Patent No.: 7,017,160

Title: CONCURRENT SHARED OBJECT
IMPLEMENTED USING A LINKED-
LIST WITH AMORTIZED NODE
ALLOCATION

Filed: 4/18/2001

Applicant: Sun Microsystems, Inc.

Reel/Frame No.: 011734/0644

Reference No: 33226/960001; P4665-CIP-0

44. Patent Application/Serial No.: 11/384,627

Title: CONCURRENCY TECHNIQUE FOR
SHARED OBJECTS

Filed: 3/20/2006

Applicant: Sun Microsystems, Inc.

Reference No: 33226/960002; P4665US-CON-0

Application No. (if known): 10/679,183

Attorney Docket No.: 33226/971001; P7863

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Revocation and Substitute POA under 37 CFR §1.36 with attached
Appendix A (17 pages)